



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,632	02/18/2004	Theodore R. Zeigler	000002-001	9087
44912	7590	02/25/2008		
WRB-IP LLP 1217 KING STREET ALEXANDRIA, VA 22314			EXAMINER BARTOSIK, ANTHONY N	
			ART UNIT 3635	PAPER NUMBER
			MAIL DATE 02/25/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/779,632

**Applicant(s)**

ZEIGLER, THEODORE R.

**Examiner**

ANTHONY N. BARTOSIK

**Art Unit**

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 and 25 is/are pending in the application.
- 4a) Of the above claim(s) 23 and 24 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-19 is/are allowed.
- 6) ☒ Claim(s) 1-16, 20-22 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/888)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This is a Second Action Non-Final in response to the Amendment/Remarks filed by the Applicant on 10/17/2007. The Examiner appreciates Applicant's notation of the references and has corrected the PTO-892 form.

#### ***Response to Arguments***

1. Applicant's arguments, filed 10/17/2007, with respect to the rejection(s) of claim(s) 1-16 and 20-22 under 35 USC § 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of an additional reference.

#### ***Claim Rejections - 35 USC § 112***

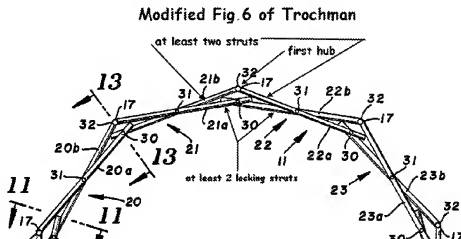
2. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification lacks proper disclosure pertaining to the compression forces and how they are increased and/or decreased during use.

#### ***Allowable Subject Matter***

3. Claims 17-19 are allowed.

**Claim Rejections - 35 USC § 103**

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-16, 20-22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trochman (US 4,193,414) in view of Price (US 2003/0164185 A1) and Zeigler (US 5,274,980).



6. In Re claim 1, Figure 4 and 6 of Trochman teach a first hub (32); at least two struts (21b, 22a from Fig. 6 above) pivotably connected at first ends thereof to the first hub (32) and movable relative to each another between a folded position and an expanded position; a tension member (Figs. 1 and 4; Col. 6 Lines 43-49) adapted to limit pivotable movement of the at least two struts such that, when in the expanded position, the at least two struts define an angle of less than 180 degrees as well as at least two locking struts (see Fig. 6 above) pivotably connected at first ends thereof (30), to connection points (see Fig. 6 above) on respective ones of the at least two struts..

Trochman fails to teach a locking hub, however Price teaches the use of locking hubs. Figures 4 and 5 as well as Paragraphs 71 and 72 of Price teach the use of locking hubs (208) in collapsible structures for structural rigidity and in keeping struts in their desired positions. It would have been obvious to one skilled in the art at the time of the invention to substitute the hub (30) of Trochman with locking hub as taught by Price in order to add structural rigidity.

Trochman also lacks the at least two locking struts being pivotably connected at second ends. Trochman does however; teach a pivot point on the strut. It would then be obvious to one skilled in the art of collapsible tent structures at the time of the invention to make strut (21a & 22a) two separate struts connected to the at least two struts at the pivot point (31). This sort of strut configuration is taught in Zeigler.

Figure 3A and Col. 8 Lines 27-34 of Zeigler teaches two struts pivotably attached to a single strut. One skilled in the art would be motivated to modify the single locking strut of Trochman and making it two separate struts as taught in Zeigler for many reasons. One such motivation would be, by separating the single locking strut into two separate struts the user would be able to replace/repair one strut without significantly weakening the structure thereby preventing failure.

Concerning the teaching of the struts of Zeigler being pinned at separate places along the strut (232), Col. 8 Lines 27-34 in Zeigler teach placing the pivot points anywhere along strut (232). Furthermore, one skilled in the art at the time of the invention would have been motivated to pin the struts as taught by Zeigler at the same

Art Unit: 3635

location in order to minimize hardware leading to lower costs and shorter assembly time.

It therefore, would have been obvious to one skilled in the art at the time of the invention to modify Trochman by making strut 21a into two separate struts as taught by Zeigler for the reasons stated above.

7. In Re claim 2, Figure 4 and Column 6 Lines 43-50 of Trochman discloses the tension member including a wire.

8. In Re claim 3, Column 6 Lines 43-50 of Trochman disclose wire that is attached to the at least two struts. Since applicant has not specified the location of the attached wire, examiner is considering the wire attached to the eyebolt in Trochman to also be attached to "the at least two struts" by the fact that the entire structure is rigidly connected.

9. In Re claim 4, Figure 4 and Column 6 Lines 43-50 of Trochman discloses a tension member including a cover (12) attached to the collapsible structure.

10. In Re claim 5, Figure 4 of Trochman discloses a tension member including a base (17, 18) to which the collapsible structure is attached.

11. In Re claim 6, the combination of Trochman, Price, and Zeigler, in order to function, teaches the limitations of claim 6.

12. In Re claim 7, when combination is expanded from the folded position to its usable position, the angle as defined by claim 7 changes, therefore at some point in the expansion the limitations of claim 7 will be met.

13. In Re claim 8, when combination is expanded from the folded position to its usable position, the angle as defined by claim 7 changes, therefore at some point in the expansion the limitations of claim 7 will be met. Furthermore, a change of size is generally recognized as being within the level of ordinary skill in the art. MPEP 2144.04.

14. In Re claim 9, the combination of references Trochman and Price teach locking struts that are each **adapted** to pivot through an angle greater than 90 degrees relative to the locking hub when the locking struts are moved between a folded position and a locked position. Furthermore, a change of size is generally recognized as being within the level of ordinary skill in the art. MPEP 2144.04.

15. In Re claim 10, Figure 6 of Trochman discloses at least three struts.

16. In Re claim 11, Figure 6 of Trochman discloses at least four struts.

Modified Figure 6 of Trochman

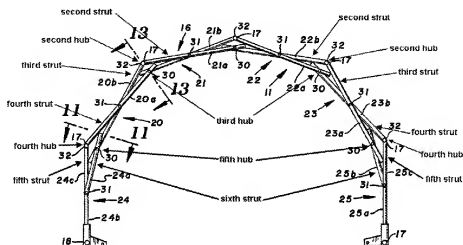


FIG. 6

17. In Re claim 12, Figure 6 of Trochman (see modified figure 6 above) discloses at least two second struts pivotally connected at first ends thereof to respective ones of the at least two struts, at least two second hubs, second ends of the at least two second struts being pivotally connected to respective ones of the at least two second hubs, at least two third struts, first ends of the at least two third struts being pivotally connected to respective ones of the at least two second hubs, at least two third hubs, second ends of the at least two first struts being pivotally connected to respective ones of the at least two third hubs, at least two fourth struts, first ends of the at least two fourth struts being pivotally connected to respective ones of the at least two third hubs and being pivotally connected to respective ones of the at least two third struts.

18. In Re claim 13, the combination of references Trochman and Price teach at least two first struts and the at least two fourth struts are each adapted to pivot through an



angle greater than 90 degrees when the at least two first struts and the at least two fourth struts pivot relative to respective ones of the at least two third hubs between a folded position and a locked position.

19. In Re claim 14, Figures 4 and 6 of Trochman disclose at least two second struts that are pivotably connected to respective ones of the at least two struts at the connection points on respective ones of the at least two struts.

20. In Re claim 15, the combination of Trochman and Zeigler (Col. 8 Lines 27-34) disclose at least two second struts that are pivotably connected to respective ones of the at least two struts at points between the connection points and the second ends of respective ones of the at least two struts.

21. In Re claim 16, the combination of Trochman and Price has been discussed above and disclose the limitations from which claim 12 depends. Examiner's interpretation of the structure set forth in claim 12 is such that the structure in claim 1 is duplicated and then attached at a central hub, thereby creating a collapsible structure square in shape. Figure 1 of Price teaches a square shaped collapsible structure utilizing a first hub (210). It would have been obvious to one skilled in the art at the time of the invention to modify the shape of Trochman to include a square structure by substituting the fist hub (32) of Trochman with the first hub as taught in Price in order to provide a more rigid structure.

22. In Re claim 20, Figure 6 of Trochman discloses the limitations of claim 20; see modified Figure 6 of Trochman above.

23. In Re claim 21, Figure 6 of Trochman discloses at least two third struts and the at least two sixth struts being each **adapted** to pivot through an angle greater than 90.degrees when the at least two third struts and the at least two sixth struts pivot relative to respective ones of the at least two fifth hubs between a folded position and a locked position.

24. In Re claim 22, Figure 4 and 5 of Price disclose a stop (236) for preventing the locking hub from moving beyond a locking position in the expanded position.

25. In Re claim 25, the combination of Trochman, Price, and Zeigler teach the limitation of claim 25 in so much as the limitations of claim 25 are considered functional. The claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended function, it meets the limitations of the claim. Since the above combination is capable of functioning as claimed it satisfies the limitations of the claim.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY N. BARTOSIK whose telephone number is (571)270-3112. The examiner can normally be reached on M-F 7:30-5:00; E.D.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Richard E. Chilcot/  
Supervisory Patent Examiner, Art  
Unit 3635

/A. N. B./  
Examiner, Art Unit 3635